Exhibit A

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July 15, 2024

VIA EMAIL
Dina McLeod
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Assistant United States Attorneys
United States Attorney's Office
Southern District of New York
One Saint Andrews Plaza
New York, New York 10007

Re: *United States v. Charlie Javice, et al.*, 23-cr-00251-AKH (S.D.N.Y.).

Dear Counsel:

Pursuant to Federal Rule of Criminal Procedure 16(b)(1)(C), we provide notice that Ms. Javice anticipates calling Dr. Konstantinos Psounis as an expert witness at trial.

Below are Dr. Psounis' qualifications and a summary of his anticipated testimony. We reserve the right to update, amend, and/or supplement this disclosure as the case proceeds. A copy of Dr. Psounis' curriculum vitae, which includes a complete list of his publications in the past ten years, along with a list of cases in which Dr. Psounis testified as an expert during the past four years is attached as Exhibit A.

I.   BACKGROUND & QUALIFICATIONS

Dr. Psounis is a professor in the Electrical and Computer Engineering and Computer Science Departments at the University of Southern California. He has been a professor at the University of Southern California since 2003 and has served as the Associate Chair of the Electrical and Computer Engineering Department since July 2021.

quinn emanuel urquhart & sullivan, llp

ABU DHABI | ATLANTA | AUSTIN | BEIJING | BERLIN | BOSTON | BRUSSELS | CHICAGO | DALLAS | DOHA | HAMBURG | HONG KONG | HOUSTON |
LONDON | LOS ANGELES | MANNHEIM | MIAMI | MUNICH | NEUILLY-LA DEFENSE | NEW YORK | PARIS | PERTH | RIYADH | SALT LAKE CITY |
SAN FRANCISCO | SEATTLE | SHANGHAI | SILICON VALLEY | SINGAPORE | STUTTGART | SYDNEY | TOKYO | WASHINGTON, DC | WILMINGTON |

Dr. Psounis holds Ph.D. and M.S. degrees in electrical engineering from Stanford University, and an undergraduate degree in electrical and computer engineering from the National Technical University of Athens where he graduated first in his class.

Dr. Psounis' field of expertise includes computer science and engineering, data modeling, machine learning methods, algorithm design, online data centers and cloud systems, and the design and implementation of artificial intelligence-enabled systems. He has published over 120 research papers on these and other topics throughout his career which have received more than 14,000 citations. Dr. Psounis has been the recipient of various awards, including the Association for Computing Machinery Distinguished Member program, recognizing those with at least 15 years of professional experience who have achieved significant accomplishments or have made a significant impact on the computing field. He also has been designated a Fellow of the Institute of Electrical and Electronics Engineers for fundamental contributions in the field of computer networks, which is the highest grade of membership reserved at most to one-tenth of one-percent of the total voting membership and is conferred by the Board of Directors upon a person with an outstanding record of accomplishments. At the University of Southern California, Dr. Psounis has taught courses on advanced topics in computer networks and on probabilistic modelling for computer and electrical engineers, among others.

II.   SUMMARY OF ANTICIPATED TESTIMONY

Based on his academic and professional experience, Dr. Psounis expects to offer the following opinions at any trial in this matter:

First, numerous web-based businesses rely on internet users to increase brand exposure and drive traffic to their sites. The meaning of the term "user," however, is variable and context-dependent, and has no single definition. The same is true for terms like "customer," "account," and "subscriber." Although all these terms broadly indicate some level of engagement with a business or brand, their meaning may be highly specific and vary even within a single company based on the products or services at issue. Understanding how an organization defines, for example, its "users" is thus important to any analyses based on "user"-based metrics.

Second, these metrics, however defined, may offer valuable information regarding consumer engagement. As a result, many companies supplement their existing data by using one or more data augmentation, synthesis, or appending programs to generate further insights into their businesses. Synthetic data analyses model the statistical properties of a company's underlying data to, for example, generate further insights into user behavior and demographic trends and mitigate privacy and data bias concerns. Appending data involves updating or adding missing data elements to an existing database to provide a more comprehensive and accurate understanding of consumer characteristics. These processes are widely used and offer organizations a deeper view into their consumer data.

A.   OPINION ONE: CONTEXT DEFINES TERMINOLOGY RELATED TO CONSUMER ENGAGEMENT

Businesses often use a variety of metrics to track consumer engagement, including data regarding users, accounts, subscribers, and customers. But the meaning of those terms is context-dependent. Definitions may vary at a macro level within industries down to the micro level within companies, business segments, products, and services.

The term "user," for example, can be divided into multiple subcategories, the applicability and definition of which are again driven by context and include:

- *Visitors*: Visitors may be classified as users who visit a website, but otherwise do not provide information directly to the site.

- *Unique Visitors*: Unique visitors may be classified as users who visit a website, but otherwise do not provide information directly to the site, that are counted only once in a given time period.

- *Active Users*: Active users may be classified as users who visit a website or utilize a particular product or service a set number of times during a particular time period.

- *Registered Users*: Registered users may be classified as visitors who have completed a registration process through a website or third-party interface.

- *Paying Users*: Paying users may be classified as visitors or registered users who have paid to receive a business's products, services, or information.

The lack of any single definition of terms like "user" has fostered debate regarding their utility[1] and what such terms—and extensions of them, *e.g.*, "user engagement"—mean and in what scenarios.[2] To promote greater clarity regarding engagement-related terms, companies sometimes

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[1] *See, e.g.*, Taylor Majewski, *It's time to retire the term "user"*, MIT Technology Review https://www.technologyreview.com/2024/04/19/1090872/ai-users-people-terms/ (April 19, 2024) ("But 'users' is also unspecific enough to refer to just about everyone. It can accommodate almost any big idea or long-term vision.").

[2] *See, e.g.*, Ruowei Xiao, et al., *Internet-of-Gamification: A Review of Literature on IoT-enabled Gamification for User Engagement*, International Journal of Human–Computer Interaction, 38(12), at 1116 (2022) ("Despite its wide usage, the term 'user engagement' lacks a consensus definition. There are various definitions proposed in different domains."); Mounia Lalmas, et al., Synthesis Lectures on Information Concepts, Retrieval, and Services, *Measuring User Engagement*, at xiii (2015) ("The term 'user engagement' is frequently referred to as a desired outcome of people's interactions with information technology, but this means different things to different people; many people use the term without articulating their definition. This creates

define them, whether in their terms and conditions, license agreements, or elsewhere. These definitions still vary widely from company to company and depending on the service or product involved.

For example, some companies expressly acknowledge a distinction between "visitor" users and "registered" users, even though the company may ultimately treat them the same. Barefoot Wine's website terms of use apply "whether you are a 'Visitor' (which means that you simply browse the Site) or you are a 'Member' (which means you have registered with us for the Site, if registration is available on the Site)," and "[t]he term 'User' means a 'Visitor' or a 'Member.'"[3] The website terms of use for the City of Newburyport, Massachusetts, state that "[a] 'Visitor' is an individual that is using or accessing the Site, but has not created a user account, and a 'User' is an individual that has created a user account through the Site."[4] The Wix terms of use are more ambiguous and "set forth the entire terms and conditions applicable to each visitor or user" of the Wix website and mobile application but collectively define those terms as "('User' or 'you')."[5] Google Analytics' terms of service similarly state that "'Users' means users and/or visitors to Your Properties," *i.e.*, "any web page, application, other property or resource under Your control that sends data to Google Analytics."[6]

Licensing agreements many times go further in defining not only the term "user" but different types of "users" tailored to specific service offerings and levels of access or engagement with a product or service. For example, Adobe's licensing agreement applies to "End Users" (not defined), and contains different provisions and definitions governing "Network Users," "Server Software Users," "Primary Users," "U.S. Government End Users," and "Educational End Users."[7] Oracle's license agreement applies to "Application Users," "Enterprise Asset Management Users," "Field Sales Users," "Financials Users," "Inventory/Shipping Users," "Marketing Users," "Manufacturing Users," "Purchasing Users," "TeleSales Users," "Application Read-Only Users,"

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further dilemmas when we turn to measurement: if we cannot define user engagement, then how do we know whether we have actually measured it?"); H.L. O'Brien & E.G. Toms, *What is user engagement? A conceptual framework for defining user engagement with technology*, Journal of the American Society for Information Science & Technology, at 1–2 (2008) ("Despite the need to engage users and create engaging technologies, there is no agreed upon definition of the construct.").

[3] Barefoot Wine, *Use Agreement*, https://www.barefootwine.ca/use-agreement.

[4] Newburyport, *Terms of Use*, https://newburyport.com/terms-use/.

[5] Wix, *Terms of Use*, https://www.wix.com/about/terms-of-use.

[6] Google Marketing Platform, *Google Analytics Terms of Service*, https://marketingplatform.google.com/about/analytics/terms/us/.

[7] Adobe, *End User License Agreement*, https://www.adobe.com/products/eula/tools/captivate.html.

"Collaboration Program Users," "Employee Users," "Hosted Named Users," "Non Employee Users – External," "Professional Users," and more.[8]

Any analysis of an organization's "users" must therefore begin with a comprehensive understanding of what "user" metric is at issue and how, specifically, it is defined. However, what a company considers its "users" often is left undefined, such as in the case of a new or developing company that has not created consistent processes or metrics to measure engagement. In general, establishing clear, agreed-on criteria to define, identify, and track an organization's users is important to any user-focused analysis.

B. OPINION TWO: SYNTHETIC, AUGMENTATION, AND APPENDING DATA SERVICES ARE COMMON METHODS TO MAXIMIZE THE VALUE OF AN ORGANIZATION'S DATA

User, customer, subscriber, and similar data may offer valuable information into an organization's consumer engagement. To derive further insights from that data, many companies utilize one or more data augmentation, synthesis, or appending programs. Although these programs vary, each relies on the company's underlying data set to, for example, generate insights into user behavior and demographic trends and mitigate privacy and data bias concerns, while preserving the existing data's statistical properties. Such programs are commonly used and serve valuable functions across industries.

Synthetic Data: Synthetic data is a process by which a seed data set is used to create additional data that maintains the statistical characteristics of the seed set and may augment it in useful ways. Synthetic data is generally derived from machine learning or mathematical or generative modelling that populates real-world patterns from an organization's existing dataset.[9] Synthetic data is widely used in both private and public sectors, including by the U.S. government.[10]

Synthetic data offers multiple benefits, particularly given advancements in artificial intelligence and machine learning that allow organizations to create synthetic data models that

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[8] Oracle, *Oracle License And Services Agreement*, https://www.oracle.com/us/corporate/pricing/olsa-ire-v122304-070683.pdf.

[9] *See, e.g.*, IBM, *What is synthetic data?* (2023), https://research.ibm.com/blog/what-is-synthetic-data; Indu Joshi, et al., *Synthetic Data in Human Analysis: A Survey*, IEEE Transactions on Pattern Analysis and Machine Intelligence, at 2–4 (2022).

[10] US. Census Bureau, *What Are Synthetic Data?* (2021), https://www.census.gov/about/what/synthetic-data.html; Syntegra, *Syntegra Partnering with National Institutes of Health (NIH) and the Bill and Melinda Gates Foundation to Democratize Access to the Largest Set of COVID-19 Patient Records*, https://www.syntegra.io/news/syntegra-partnering-with-national-institutes-of-health-nih-and-the-bill-and-melinda-gates-foundation-to-democratize-access-to-the-largest-set-of-covid-19-patient-records.

replicate the underlying data's properties with a high degree of accuracy.[11] *First*, for example, privacy requirements may impose limitations on available data including how that data may be used.[12] Synthetic data allows for the creation of datasets that mirror the underlying data's characteristics in a manner that reduces the amount of personal information disclosed in the process.[13] *Second*, synthetic data may mitigate bias. An existing consumer dataset, as an example, may be skewed towards certain demographics, with any models based on that limited data accordingly presenting the same biases. Synthetic data can identify and account for these discrepancies to create a more balanced and representative dataset.[14] *Third*, beyond mitigating privacy and bias concerns, synthetic data has other commercially useful benefits including augmenting an existing dataset with underrepresented data using oversampling, which allows for more fine-grained data analysis.[15]

Data Appending: Data appending is the process of updating or adding missing data elements—such as demographic, employment, phone, or email data—to an existing database. Appended data may be obtained from publicly-available resources or purchased in the open market from companies that specialize in the collection of personal data. Data appending commonly involves a standardization process that appends missing data, corrects errors in existing data, and removes redundant or outdated data. The appending process can accordingly help improve the accuracy and quality of an organization's data and enhance visibility into a company's consumers through additional information.

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[11] *See, e.g.*, Brian Eastwood, MIT Sloan School of Management, *What is synthetic data — and how can it help you competitively?*, https://mitsloan.mit.edu/ideas-made-to-matter/what-synthetic-data-and-how-can-it-help-you-competitively (study from MIT "demonstrated that there was 'no significant difference' between predictive models generated on synthetic data and real data").

[12] National Science Foundation, *Human Subjects*, https://www.nsf.gov/bfa/dias/policy/human.jsp; National Institutes of Health, *Protecting Sensitive Data and Information Used in Research*, https://grants.nih.gov/grants/policy/nihgps/html5/section_2/2.3.12_protecting_sensitive_data_and_information_used_in_research.htm (updated April 2024).

[13] *See, e.g.*, US. Census Bureau, *supra* note 10 ("The Census Bureau is researching a new fully synthetic data product to explore whether this method would allow us to produce more accurate data—correcting for known sources of error and potentially allowing for more tabulations at lower levels of geography—for our users while maintaining our respondents' privacy.")

[14] *See, e.g.*, IBM, *supra* note 9; Joshi, et al., *supra* note 9, at 13; N. Jaipuria, et al., *Deflating Dataset Bias Using Synthetic Data Augmentation*, at 8 (Apr. 2020), https://arxiv.org/pdf/2004.13866.

[15] *See, e.g.*, William G. Cochran, *Sampling Techniques*, 3rd Edition; Ling, Charles X., and Chenghui Li., *Data mining for direct marketing: Problems and solutions*, Kdd. Vol. 98. 1998; Sharon Y. Li, *Automating Data Augmentation: Practice, Theory and New Direction*, The Stanford AI Lab Blog, http://ai.stanford.edu/blog/data-augmentation/; US. Census Bureau, *supra* note 10 (discussing research regarding "a new fully synthetic data product" that could "potentially allow[] for more tabulations at lower levels of geography").

<p style="text-align:center">*   *   *</p>

We reserve the right to supplement and/or amend this disclosure, including in response to the government's disclosures and the evidence presented in its case-in-chief.

Sincerely,

/s/ Samuel P. Nitze
Samuel P. Nitze

Reviewed and Approved by:

/s/ Dr. Konstantinos Psounis
Dr. Konstantinos Psounis

EXHIBIT A

Konstantinos Psounis
Professor

kpsounis@usc.edu
https://sites.usc.edu/kpsounis/

Curriculum Vitae

Education	STANFORD UNIVERSITY	Stanford, CA

STANFORD UNIVERSITY — Stanford, CA
Department of Electrical Engineering — Jan. 1999 - Dec. 2002
Ph.D. degree in Electrical Engineering. Thesis title: "Probabilistic Methods for Web Caching and Performance Prediction of IP Networks and Web Farms".

STANFORD UNIVERSITY — Stanford, CA
Department of Electrical Engineering — Sep. 1997 - Jan. 1999
M.S. degree in Electrical Engineering. GPA: 4.0/4.0. (Actual GPA 4.05/4.0.)

NATIONAL TECHNICAL UNIVERSITY OF ATHENS — Athens, Greece
Electrical and Computer Engineering Department — Sep. 1992 - June 1997
Diploma in Electrical and Computer Engineering. GPA: 9.74/10.0. (Graduated ranking 1st in the class of '97.)

Work in Academia

UNIVERSITY OF SOUTHERN CALIFORNIA — Los Angeles, CA
Electrical and Computer Engineering (ECE) and Computer Science (CS) departments
Professor — Nov. 2017 - now
Associate Chair of ECE department — July 2021 - now
Associate Chair of ECE department — Jan. 2019 - Aug 2019
Associate Professor — May. 2009 - Nov. 2017
Assistant Professor — Sep. 2003 - Apr. 2009
Research interests: Modeling, performance analysis, algorithm design, machine learning methods, and system design and implementation for efficient, AI-enabled and privacy-preserving networked, distributed systems, including the Internet and the web, data centers and cloud systems, wireless systems (e.g. WiFi, cellular, IoT, spectrum sharing, delay tolerant, mobile ad hoc), augmented and virtual reality systems, autonomous robotic vehicle and drone systems, and peer to peer systems.

STANFORD UNIVERSITY — Stanford, CA
Visiting Associate Professor — Aug. 2009 - Dec. 2009
Electrical Engineering department.

STANFORD UNIVERSITY — Stanford, CA
Postdoctoral Research Fellow — Jan. 2003 - Aug. 2003
Scheduling of Internet flows and multi-server systems.

Technical Work outside academia

ADANT TECHNOLOGIES
Technical Consultant — Jan. 2017 - May 2018
WiFi 802.11ax and smart antennas.

QUANTENNA COMMUNICATIONS
Technical Consultant — Jan. 2015 - 2016
Advanced MAC and PHY layer techniques applied to next generation wireless networks.

HONEYWELL
Technical Consultant — Sep. 2013 - Jun. 2014
Sensor-network based fire alarm systems.

SPACEMUX, INC.
Co-founder and CEO   May 2013 - Dec. 2014
Increasing wireless bandwidth and speed tenfold.

CISCO SYSTEMS   San Jose, CA
Technical Consultant   Sep. 2009 - Dec. 2009
Vehicular multi-technology wireless connectivity.

FINEGROUND NETWORKS INC.   Cambell, CA
Technology Architect   Sep. 2000 - June 2001
Accelerating web downloads using delta encoding.

Expert Witness
Ongoing Work

GOOGLE RTB CONSUMER PRIVACY LITIGATION
Case No. 4:21-cv-02155-YGR-VKD (N.D. Cal.)   July 2023 - now
Representing defendant Google.
Reports:
Initial expert report   Sep. 29, 2023
Court Appearances:
Deposition re initial expert report   Oct. 16, 2023

Expert Witness
Completed Work

BROWN V. GOOGLE LLC
Case No. 4:20-cv-03664-YGR-SVK (N.D. Cal.)   Apr. 2022 - Jan. 2024
Representing defendant Google, judge only certified an injunctive class, case settled.
Reports:
First rebuttal expert report   June 7, 2022
Second rebuttal expert report   Aug. 30, 2023
Declarations:
First declaration   Nov. 30, 2022
Second declaration   Feb. 10, 2023
Court Appearances:
Deposition re first rebuttal expert report   Aug. 19, 2022
Deposition re second rebuttal expert report   Oct. 9, 2023

ATLAS GLOBAL TECHNOLOGIES VS ASUSTeK COMPUTER INC.
Case No. 6:21-cv-00820-ADA (E.D. Texas)   Sep. 2022 - Dec. 2023
Representing plaintiff Atlas, case settled.
Reports:
Rebuttal expert report re validity of multiple patents   July 14, 2023
Court Appearances:
Deposition re validity of multiple patents   Aug. 1, 2023

ATLAS GLOBAL TECHNOLOGIES V. ONEPLUS TECHNOLOGY (SHENZHEN) CO., LTD
Case No. 6:21-CV-01217-ADA (W. D. Texas)   Mar. 2023 - Dec. 2023
Representing plaintiff Atlas, case settled.
Declarations:

Declaration re claim construction for multiple patents   Nov. 18, 2022

Zyxel Comm and Networks Corporation v. Atlas Global Technologies
Case No IPR2023-00877   Mar. 2023 - Oct. 2023
Representing patent owner Atlas. PTAB denied institution of IPR. Case settled.
Declarations:
Declaration re validity of a patent   Aug. 11, 2023

Zyxel Comm and Networks Corporation v. Atlas Global Technologies
Case No IPR2023-00863   Mar. 2023 - Oct. 2023
Representing patent owner Atlas. PTAB denied institution of IPR. Case settled.
Declarations:
Declaration re validity of a patent   Aug. 11, 2023

Atlas Global Technologies v. Sercom Corp.
Case No. 6:21-cv-00818-ADA (E.D. Texas)   Oct. 2022 - Oct. 2023
Representing plaintiff Atlas, case settled.
Reports:
Rebuttal expert report re validity of multiple patents   July 14, 2023
Court Appearances:
Deposition re validity of multiple patents   Aug. 1, 2023

Sercomm Corp. v. Atlas Global Technologies
Case No. IPR2022-01519   Sep. 2022 - Apr. 2023
Representing patent owner Atlas, PTAB denied institution of IPR.
Declarations:
Declaration re validity of a patent   Jan. 19, 2023

Sercomm Corp. v. Atlas Global Technologies
Case No. IPR2022-01520   Sep. 2022 - Apr. 2023
Representing patent owner Atlas, PTAB denied institution of IPR.
Declarations:
Declaration re validity of a patent   Jan. 19, 2023

Atlas Global Technologies vs TP-Link Tech., Co, et al.
Case No. 2:21-cv-00430-JRG (E.D. Texas)   Sep. 2022 - Sep. 2023
Representing plaintiff Atlas. Atlas was granted the full requested damages amount.
Reports:
Rebuttal expert report re validity of multiple patents   May 23, 2023
Court Appearances:
Deposition on opinions rendered re validity of multiple patents   June 5, 2023

Broadcom v. Netflix
Case No. 3:20-cv-04677-JD (N.D. Cal.)   Jan. 2021 - Apr. 2022
Representing defendant Netflix. Judge ordered the case to stay.

CA and AVAGO v. Netflix
Case No. 2:21-CV-00080-JRG-RSP (E.D. Texas)   Jan. 2021 - Apr. 2022
Representing defendant Netflix. Judge ordered the case to stay.
Reports:
Opening expert report re invalidity of patents   Dec. 20, 2021
Supplemental opening expert report re invalidity of patents   Dec. 27, 2021
Rebuttal expert report re infringement of patents   Jan. 11, 2022
Declarations:
Declaration re claim construction for patents   Aug. 30, 2021
Court Appearances:
Deposition re invalidity and non-infringement of patents   Jan. 19, 2022

Teaching Experience	- Co-creator and instructor for the USC graduate class EE597: "Wireless Networks". Content: Introduction to current and next generation wireless networking technologies, detailed exploration of fundamental architectural and design principles used at all layers. - Instructor for the USC graduate class EE503: "Probability for Electrical and Computer Engineering". Content: Probability, discrete and continuous time Markov chains, basic queueing theory. - Instructor for the USC undergrad class EE465: "Probabilistic Methods in Computer Systems Modelling". Content: Probability, Markov chains, simulations. - Creator and instructor for the USC graduate class EE650: "Advance Topics in Computer Networks: Mathematical tools for analyzing wired and wireless networks". Content: Applications to networking problems of probability, queueing, Lyapunov functions, fluid limits, bipartite matchings, stable marriages, random walks on graphs, deterministic and stochastic optimization, statistical analysis, information theory, game theory.

PhD Student Supervision

- Dimitris Andreadis (starting Aug. 2024)
- Ryan Swift (starting Aug. 2024)
- Pouya Esmaili (starting Aug. 2024)
- Jike Zhong (starting Aug. 2024)
- Stavros Damianakis (starting Aug. 2024)
- Rohan Sequeira (Aug. 2023 - now)
- Te Yi Kan (Jan. 2023 - now)
- Tina Esmaeilzadeh (Aug. 2022 - now)
- Namo Asavisanu (Aug. 2021 - now)
- Jiang Zhang (Aug. 2019 - May 2024, currently at *Facebook*)
- Lillian Clark (co-advised with Prof. Bhaskar Krisnamachari, Sep. 2018 - March 2023, currently at *SpaceX*)
- Hang Qiu (co-advised with Prof. Ramesh Govindan, Jan. 2015 - June 2021, currently *Assistant Professor at the University of California, Riverside*)
- Po-Han Huang (Sep. 2015 - Jan. 2020, currently at *Facebook*)
- Kaidong Wang (Sep. 2014 - Dec. 2019, currently at *Qualcomm*)
- Yonglong Zhang (Sep. 2013 - Dec. 2018, currently at *Facebook*)
- Matthew Clark (Sep. 2013 - Dec. 2017, currently at *Aerospace Corporation*)
- Weng Chon Ao (Sep. 2012 - Dec. 2017, currently at *Qualcomm*)
- Antonios Michaloliakos (Aug. 2010 - Sep. 2016, currently at *Enfabrica, California*)

- Ranjan Pal (co-advised with Prof. Leana Golubchik, Jan. 2009 - Aug. 2014, currently *Research Scientist at MIT*)
- Vlad Horia Balan (Sep. 2007 - Aug. 2013, currently at *Google*)
- Wei-Cherng Liao (Sep. 2004 - Dec. 2008, currently at *MediaTek, Taiwan*)
- Apoorva Jindal (Sep. 2003 - Dec. 2008, currently at *Uber*)
- Fragkiskos Papadopoulos (Sep. 2003 - Dec. 2007, currently *Associate Professor at Cyprus University of Technology, Cyprus*)
- Thrasyvoulos Spyropoulos (Sep. 2003 - Jun. 2006, currently *Professor at Technical University of Crete, Greece*)

Proposals Funded	Amazon Grant Sep. 2023

Amazon Grant   Sep. 2023
Proposal title: Private labelling and learning for voice assistants with cameras

Amazon Grant   Sep. 2022
Proposal title: Federated learning with secure aggregation: Accessing and improving its privacy

CA-Santa Monica Mountains Conservancy Grant   Dec. 2021
Proposal title: Wildfire Detection and Fighting Using a Network of Collaborative Drones

NSF SaTC Grant   Oct. 2020 - Sep. 2025
National Science foundation (NSF) award under the Secure and Trustworthy Computing (SaTC) call.
Proposal title: SaTC: Frontiers: Collaborative: Protecting Personal Data Flow on the Internet.

NSF CNS Grant   Oct. 2020 - Sep. 2023
National Science foundation (NSF) award under the Computer and Networked Systems (CNS) call.
Proposal title: CNS Core: Medium: Network-Enabled Cooperative Perception for Future Autonomous Vehicles.

NSF NeTS Grant   Sep. 2019 - Aug. 2022
National Science foundation (NSF) award under the Networking Technology and Systems (NeTS) call.
Proposal Title: CNS Core: Medium: Collaborative Research: Privacy-Preserving Mobile Crowdsourcing.

Cisco Systems Grant   April 2019
Research grant from the Cisco University Research Program.
Proposal Title: Virtual and augmented reality over next generation WiFi.

Cisco Systems Grant   Dec 2016
Research grant from the Cisco University Research Program.
Proposal Title: Data-driven formal optimization of data centers.

NSF NeTS Grant   Sep. 2016 - Aug. 2020
National Science foundation (NSF) award under the Networking Technology and Systems (NeTS) call.
Proposal Title: Spectrum Sharing Systems for Wireless Networks: Performance and Privacy Challenges.

Adant Technologies Grant   June 2016
Research grant from Adant Technologies.
Proposal Title: Using reconfigurable antenna systems with WiFi communication devices.

HUAWEI GRANT   May 2016
Research grant from Huawei.
Proposal Title: Addressing wireless bandwidth demand via asynchronously coordinated
multi-cell deployments.

ADANT TECHNOLOGIES GRANT   Dec. 2015
Research grant from Adant Technologies.
Proposal Title: Asynchronous coordination of WiFi transmitters equipped with smart
antennas for enhanced spectral efficiency.

NSF EARS GRANT   Sep. 2014 - Aug. 2019
National Science foundation (NSF) award under the Enhancing Access to the Radio Spec-
trum (EARS) crosscutting program.
Proposal Title: Future Wireless Broadband Access: Cross-Optimizing Hardware, Physical
and Network Layers.

CISCO SYSTEMS GRANT   May 2014
Research grant from the Cisco University Research Program.
Proposal Title: Rateless encoded UDP for error-resilient wireless links.

ARMY RESEARCH LABORATORY (ARL) GRANT   Sep. 2009 - Aug. 2014
CTA: Communications and Networking Academic Research Center.
Proposal Title: QUANTA: Quality of Information-Aware Networks for Tactical Applica-
tions.

DOCOMO LABS GRANT   Sep. 2011 - 2013
Research support from the DoCoMo Labs, US.
Proposal Title: MIMO systems with TDD

CISCO SYSTEMS GRANT   Sep. 2011 - 2013
Research grant from the Cisco University Research Program.
Proposal Title: Efficient airtime allocation in wireless networks.

MING HSIEH INSTITUTE (MHI) GRANT   May 2011 - 2013
MHI grant to build a large scale software radio testbed and implement distributed MIMO,
interference alignment and massive MIMO systems, as well as perform channel sounding
and modelling.
Proposal Title: Large-Scale Software-Radio Testbed.

METRANS TRANSPORTATION CENTER GRANT   Aug. 2009 - Aug. 2010
METRANS Transportation Center grant to conduct research on metropolitan transporta-
tion issues.
Proposal title: End-to-end performance in vehicular networks with an emphasis on safety
and security applications.

CISCO SYSTEMS GRANT   Sep. 2008
Research grant from the Cisco University Research Program.
Proposal Title: Neighborhood centric transport for home networking environments.

NSF NETS GRANT   Aug. 2008 - Aug. 2011
National Science foundation (NSF) award under the Networking Technology and Systems
(NeTS) call.
Proposal title: Contention-Awareness in Mesh Transport: Theory and Practice.

CISCO SYSTEMS GRANT   Apr. 2008
Research grant from the Cisco University Research Program.

Proposal Title: TCP challenges in multi-hop wireless networks. From the networking workshop "The Future of TCP: Train-wreck or Evolution?".

NSF REU site Grant   Mar. 2008 - Mar. 2011
Grant to establish a National Science Foundation (NSF) Research Experiences for Undergraduates (REU) site within the Computer Science department at the Viterbi School of Engineering.
Proposal Title: Coordination, Communication, Autonomy: Principles and Technologies.

VSoE Innovative Research Fund Grant   Dec. 2007 - Dec. 2008
Fund to initiate a Viterbi School of Engineering (VSoE) invited workshop on Wireless Networks. Proposal title: Establishing a New USC Invited Workshop on Theory and Practice in Wireless Networks.

METRANS transportation center Grant   Oct. 2007 - Dec. 2008
METRANS Transportation Center grant to conduct research on metropolitan transportation issues.
Proposal title: Efficient Routing for Safety Applications in Vehicular Networks.

NSF NeTS Grant   Aug. 2005 - Aug. 2008
National Science foundation (NSF) award under the Networking Technology and Systems (NeTS) call.
Proposal title: Efficient Routing in Delay Tolerant Networking.

Zumberge Faculty Research and Innovation Grant   July 2005 - June 2006
The James H. Zumberge faculty research and innovation award is granted to a selected number of Professors at the University of Southern California.
Proposal title: Routing in Intermittently Connected Mobile Networks.

Charles Lee Powell Scholarship Grant   Dec. 2003 - Dec. 2004
The Charles Lee Powell grant is granted to a selected number of Assistant Professors at the University of Southern California.

Awards   ACM Distinguished Member   Nov. 2019
The ACM Distinguished Member program recognizes up to 10 percent of ACM worldwide membership with at least 15 years of professional experience who have achieved significant accomplishments or have made a significant impact on the computing field.

IEEE Fellow   Jan. 2018
The IEEE Grade of Fellow is conferred by the IEEE Board of Directors upon a person with an outstanding record of accomplishments in any of the IEEE fields of interest. The total number selected in any one year cannot exceed one-tenth of one- percent of the total voting membership. IEEE Fellow is the highest grade of membership and is recognized by the technical community as a prestigious honor and an important career achievement.

Distinguished Member of 2018 IEEE Infocom TPC Award   2018
The IEEE Communications Society awards annually a select number of TPC members of its flagship conference IEEE Infocom with a Distinguished Member award.

Distinguished Member of 2016 IEEE Infocom TPC Award   2016
The IEEE Communications Society awards annually a select number of TPC members of its flagship conference IEEE Infocom with a Distinguished Member award.

ACM Notable Article in Computing - Best of 2013   2014
Selection of paper "Modelling BitTorrent-like systems with many classes of users", W.-C.

Liao, F. Papadopoulos, K. Psounis, and C. Psomas, ACM Transactions on Modelling and Computer Simulation, Vol. 23, Issue 2, Article No. 13, May 2013.

MEPC BUSINESS PLAN COMPETITION - 2ND PLACE   2013
Presentation of SpaceMUX Inc., a USC spinoff startup specializing in advanced physical layer techniques applied to next generation wireless networks.

ACM SENIOR MEMBER AWARD   Jan. 2009
The Senior Member grade recognizes those ACM members with at least 10 years of prof essional experience and 5 years of continuous professional membership who have demonstrated performance that sets them apart from their peers.

IEEE SENIOR MEMBER AWARD   Nov. 2008
Qualifications for this distinction are at least ten years of professional practice and five years of significant performance as demonstrated by substantial engineering responsibility or achievement, publication of engineering and technical papers, books or inventions, and the development and teaching of engineering courses.

FUTURE OF TCP BEST PRESENTATION AWARD   Apr. 2008
"Best and Most Compelling Presentation and Demonstration Award" at the networking workshop "The Future of TCP: Train-wreck or Evolution?" held at Stanford University and sponsored by Cisco Systems.

ZUMBERGE FACULTY RESEARCH AND INNOVATION AWARD   July 2005
The James H. Zumberge faculty research and innovation award is granted to a selected number of Professors at the University of Southern California.

CHARLES LEE POWELL SCHOLARSHIP AWARD   Dec. 2003
The Charles Lee Powell award is granted to a selected number of Assistant Professors at the University of Southern California.

ILLEANA AND ERIC BENHAMOU STANFORD GRADUATE FELLOWSHIP   1997 - 2002
Fellowship is awarded for four years to a very select number of PhD students based on academic merit.

BEST-STUDENT NATIONAL TECHNICAL UNIVERSITY OF ATHENS AWARD   1997
Awarded yearly to the student that graduates with the highest GPA across all departments of National Technical University of Athens.

OTHER GRADUATE STUDIES AWARDS   1997 - 1998
Regent's Fellowship by University of California Berkeley, Charles Lee Powell Foundation Graduate Fellowship by Caltech, Gordon Y. S. Wu Fellowship in Engineering by Princeton University, Sage Fellowship by Cornell University.

Publications   REFEREED JOURNALS

1. E. Bakopoulou, M. Yang, J. Zhang, K. Psounis and A. Markopoulou. "Location Leakage in Federated Signal Maps", *IEEE Transactions on Mobile Computing*, October 2023.

2. R. Pal, N. Sastry, E. Obiodu, S. Prabhu, K. Psounis. "EdgeMart: A Sustainable Networked OTT Economy on the Wireless Edge for Saving Multimedia IP Bandwidth", *ACM Transactions on Autonomous and Adaptive Systems*, July 2023, DOI: 10.1145/3605552.

3. E. Alimpertis, A. Markopoulou, C. Butts, E. Bakopoulou, K. Psounis. "A Unified Prediction Framework for Signal Maps: Not All Measurements are Created Equal", *IEEE Transactions on Mobile Computing*, October 2022, DOI: 10.1109/TMC.2022.3221773.

4. J. Zhang, L. Clark, M. Clark, K. Psounis and P. Kairouz. "Privacy-utility trades in crowdsourced signal map obfuscation", *Elsevier Computer Networks*, Vol. 215, October 2022. DOI: 10.1016/j.comnet.2022.109187

5. L. Clark, J. Galante, B. Krishnamachari, and K. Psounis. "A Queue-Stabilizing Framework for Networked Multi-Robot Exploration", *IEEE Robotics and Automation Letters*, February 2021, DOI: 10.1109/LRA.2021.3061304.

6. W. Chon Ao, P. Huang and K. Psounis. "Joint Workload Distribution and Capacity Augmentation in Hybrid Datacenter Networks", *IEEE/ACM Transactions on Networking*, Vol. 29, Issue 1, Feb. 2021, DOI: 10.1109/TNET.2020.3027607.

7. R. Pal, K. Psounis, J. Crowcroft, F. Kelly, P. Hui, J. Kelly, A. Chatterjee, L. Golubchil, and S. Tarkoma. "When Are Cyber Blackouts in Modern Service Networks Likely? A Network Oblivious Theory On Cyber (Re)Insurance Feasibility", *ACM Transactions on Management Information Systems*, Article No.: 5, June 2020.

8. M. Clark and K. Psounis. "Optimizing Primary User Privacy in Spectrum Sharing Systems", *IEEE/ACM Transactions on Networking*, Vol. 28, Issue 2, April 2020.

9. W. Chon Ao and K. Psounis. "Resource-constrained Replication Strategies for Hierarchical and Heterogeneous Tasks", *IEEE Transactions on Parallel and Distributed Systems*, Vol. 31, Issue 4, June 2020.

10. K. Wang and K. Psounis. "Efficient scheduling and resource allocation in 802.11ax multi-user transmissions", *Computer Communications, Elsevier*, Vol. 152, pp.171-186, February 2020.

11. R. Pal, L. Golubchik, K. Psounis and T. Bandyopadhyay. "On Robust Estimates of Correlated Risk in Cyber-Insured IT Firms: A First Look at Optimal AI-Based Estimates under Small Data", *ACM Transactions on Management Information Systems*, Article No.: 9, October 2019.

12. Y. Zhang and K. Psounis. "Efficient Indoor Localization via Switched-beam Antennas", *IEEE Transactions on Mobile Computing*, June 2019.

13. P. Huang and K. Psounis, "Optimal Backhauling for Dense Small-Cell Deployments Using mmWave Links", *Computer Communications Journal, Elsevier*, Vol: 139, April 2019.

14. R. Pal, L. Golubchik, K. Psounis, and P. Hui, "Security Pricing as Enabler of Cyber-Insurance: A First Look at Differentiated Pricing Markets", *IEEE Transactions on Dependable and Secure Computing*, Vol. 16, Issue 2, March-April 2019.

15. W. Chon Ao and K. Psounis. "Data-locality-aware User Grouping in Cloud Radio Access Networks", *IEEE Transactions on Wireless Communications*, Vol: 17, Issue: 11, Nov. 2018.

16. Y. Zhang and K. Psounis. "Consistently High MIMO Rates via Switched-beam Antennas", *IEEE/ACM Transactions on Networking*, Vol: 26, Issue: 5, Oct. 2018.

17. W. Chon Ao and K. Psounis. "Fast Content Delivery via Distributed Caching and Small Cell Cooperation", *IEEE Transactions on Mobile Computing*, Vol: 17, Issue: 5, May 2018.

18. R. Pal, L. Golubchik, K. Psounis, "Improving Cyber-Security via Profitable Insurance Markets", *ACM SIGMETRICS Performance Evaluation Review*, Vol: 45, Issue 4, Mar. 2018.

19. M. Clark and K. Psounis. "Trading Utility for Privacy in Shared Spectrum Access Systems", *IEEE/ACM Transactions on Networking*, Vol. 26, Issue 1, February 2018.

20. A. Michaloliakos, W. C. Ao, K. Psounis and Y. Zhang. "Asynchronously Coordinated Multi-timescale beamforming architecture for multi-cell networks", *IEEE/ACM Transactions on Networking*, Vol. 26, Issue 1, February 2018.

21. W. Chon Ao and K. Psounis. "Approximation Algorithms for Online User Association in Multi-Tier Multi-Cell Mobile Networks", *IEEE/ACM Transactions on Networking*, Vol: 25, Issue: 4, August 2017.

22. M. Clark and K. Psounis. "Equal Interference Power Allocation for Efficient Shared Spectrum Resource Scheduling", *IEEE Transactions on Wireless Communications*, Vol: 16, Issue 1, January 2017.

23. A. Michaloliakos, R. Rogalin, Y. Zhang, K. Psounis and G. Caire. "Performance Modeling of Next-Generation WiFi Networks", *Computer Networks Journal*, Vol. 105, pp.150-165, August 2016.

24. R. Rogalin, O. Y. Bursalioglu, H. Papadopoulos, G. Caire, A. Molisch, A. Michaloliakos, V. Balan, and K. Psounis. "Scalable Synchronization and Reciprocity Calibration for Distributed Multiuser MIMO", *IEEE Transactions on Wireless Communications*, Vol. 13, Issue 4, pp. 1815 - 1831, April 2014.

25. H. V. Balan, R. Rogalin, A. Michaloliakos, K. Psounis and G. Caire. "AirSync: Enabling Distributed Multiuser MIMO with Full Spatial Multiplexing", *IEEE/ACM Transactions on Networking*, Vol. 21, Issue 6, pp. 1681 - 1695, December 2013.

26. A. Jindal and K. Psounis. "On the Efficiency of CSMA-CA Scheduling in Wireless Multihop Networks", *IEEE/ACM Transactions on Networking*, Vol. 21, Issue 5, pp. 1392 - 1406, October 2013.

27. W.-C. Liao, F. Papadopoulos, K. Psounis, and C. Psomas. "Modelling BitTorrent-like systems with many classes of users", *ACM Transactions on Modelling and Computer Simulation*, Vol. 23, Issue 2, Article No. 13, May 2013.

28. A. Jindal, K. Psounis, and M. Liu, "CapEst: A Measurement-based Approach to Estimating Link Capacity in Wireless Networks", *IEEE Transactions on Mobile Computing*, Vol. 11, Iss. 12, pp. 2098–2108, May 2012.

29. S. Rangwala, A. Jindal, K.-Y. Jang, K. Psounis, and R. Govindan. "Neighborhood-centric congestion control for multi-hop wireless mesh networks", *IEEE/ACM Transactions on Networking*, Vol. 19, No. 6, pp. 1797–1810, December 2011.

30. W.-J. Hsu, T. Spyropoulos, K. Psounis and A. Helmy. "Modelling Spatial and Temporal Dependencies of User Mobility in Wireless Mobile Networks", *IEEE/ACM Transactions on Networking*, Vol. 17, Iss. 5, pp. 1564–1577, October 2009.

31. A. Jindal and K. Psounis. "The Achievable Rate Region of 802.11-Scheduled Multihop Networks", *IEEE/ACM Transactions on Networking*, Vol. 17, Iss. 4, pp. 1118–1131, August 2009.

32. A. Jindal, and K. Psounis. "Contention-Aware Performance Analysis of Mobility-Assisted Routing", *IEEE Transactions on Mobile Computing*, Vol. 8, No. 2, 145-161, February 2009.

33. T. Spyropoulos, K. Psounis, and C. Raghavendra. "Efficient Routing in Intermittently Connected Mobile Networks: The Multiple-copy Case", *IEEE/ACM Transactions on Networking*, Vol. 16, Iss. 1, pp. 77–90, February 2008.

34. T. Spyropoulos, K. Psounis, and C. Raghavendra. "Efficient Routing in Intermittently Connected Mobile Networks: The Single-copy Case", *IEEE/ACM Transactions on Networking*, Vol. 16, Iss. 1, pp. 63–76, February 2008.

35. F. Papadopoulos and K. Psounis. "Efficient Identification of Uncongested Internet Links for Topology Downscaling", *ACM SIGCOMM Computer Communication Review (CCR)*, Vol. 37, Issue 5, pp. 39–52, October 2007.

36. W.-C. Liao, F. Papadopoulos and K. Psounis. "Performance Analysis of BitTorrent-like Systems with Heterogeneous Users", *Performance Evaluation Journal*, Vol. 64, Issues 9–12, pp. 876-891, October 2007.

37. F. Papadopoulos, K. Psounis, and R. Govindan. "Performance Preserving Topological Downscaling of Internet-like Networks", *IEEE Journal on Selected Areas in Communications (JSAC)*, special issue on "Sampling the Internet: Techniques and Applications", Vol. 24, No. 12, pp. 2313-2326, December 2006.

38. W.-C. Liao, F. Papadopoulos, and K. Psounis. "A Peer-to-peer Cooperation Enhancement Scheme and its Performance Analysis", *Journal of Communications (JCM)*, Vol. 1, No. 7, pp. 24–35, November/December 2006.

39. A. Jindal and K. Psounis. "Modelling Spatially Correlated Data in Sensor Networks", *ACM Transactions on Sensor Networks*, Vol. 2, Issue 4, pp. 466 - 499, November 2006.

40. S. Rangwala, R. Gummandi, R. Govindan, and K. Psounis. "Interference-aware Fair Rate Control in Wireless Sensor Networks", *ACM SIGCOMM Computer Communication Review (CCR)*, Vol. 36, Issue 4, pp. 63–74, October 2006.

41. W.-C. Liao, F. Papadopoulos, and K. Psounis. "An Efficient Algorithm for Resource Sharing in Peer-to-peer Networks", *Lecture Notes in Computer Science, Springer*, Vol. 3976/2006, pp. 592–605, April 2006.

42. K. Psounis, P. Molinero Fernandez, B. Prabhakar, and F. Papadopoulos. "Systems with Multiple Servers under Heavy-tailed Workloads", *Performance Evaluation Journal*, Vol. 62, Issue 1–4, pp. 456–474, October 2005.

43. R. Pan, K. Psounis, B. Prabhakar, and D. Wischik. "SHRiNK: A Method for Enabling Scaleable Performance Prediction and Efficient Network Simulation", *IEEE/ACM Transactions on Networking*, Vol. 13, No. 5, pp. 975–988, October 2005.

44. J. Faruque, K. Psounis, and A. Helmy. "Analysis of Gradient-based Routing Protocols in Sensor Networks", *Lecture Notes in Computer Science, Springer-Verlag*, Vol. 3560/2005, pp. 258–275, July 2005.

45. K. Psounis, A. Zhu, B. Prabhakar, and R. Motwani. "Modelling Correlations in Web-Traces and Implications for Designing Replacement Policies", *Computer Networks Journal*, Vol. 45, No. 4, pp. 379–398, July 2004.

46. K. Psounis, R. Pan, B. Prabhakar, and D. Wischik. "The Scaling Hypothesis: Simplifying the Prediction of Network Performance Using Scaled-down Simulations", *ACM SIGCOMM Computer Communication Reviews*, Vol. 33, No. 1, pp. 35–40, January 2003.

47. K. Psounis and B. Prabhakar. "Efficient Randomized Web-Cache Replacement Schemes Using Samples from Past Eviction-Times", *IEEE/ACM Transactions on Networking*, Vol. 10, No. 4, pp. 441-454, August 2002.

48. K. Psounis, R. Pan, and B. Prabhakar. "An Approximate Fair Dropping Scheme for Variable Length Packets", *IEEE Micro*, Vol. 21, No. 1, pp. 48–56, January/February 2001.

49. K. Psounis. "Active Networks, Applications, Security, Safety, and Architectures", *IEEE Communications Surveys Magazine*, Vol. 2, No. 1, pp. 1–16, 1st quarter 1999.

Conference, Peer-reviewed, Full-length Papers

1. Jiang Zhang, Qiong Wu, Yiming Xu, Cheng Cao, Zheng Du, and Konstantinos Psounis, "Efficient Toxic Content Detection by Bootstrapping and Distilling Large Language Models", in *Proceedings of AAAI*, 2024.

2. Y. Hu, X. Ye, Y. Liu, S. Kundu, G. Datta, S. Mutnuri, N. Asavisanu, N.Ayanian, K. Psounis, and P. Beerel, "FireFly A Synthetic Dataset for Ember Detection in Wildfire", in *Proceedings of the 5th Workshop on Artificial Intelligence for Humanitarian Assistance and Disaster Response, at ICCV*, 2023.

3. J. Zhang, H. Askari, K. Psounis, and Z. Shafiq, "No Video Left Behind: A Utility-Preserving Obfuscation Approach for YouTube Recommendations", in *Proceedings of PETS*, 2023.

4. A. Elkordy, J. Zhang, Y. Ezzeldin, K. Psounis, and S. Avestimehr, "How Much Privacy Does Federated Learning with Secure Aggregation Guarantee?", in *Proceedings of PETS*, 2023.

5. H. Qiu, P.-H. Huang, N. Asavisanu, X. Liu, K. Psounis, and R. Govindan, "Auto-Cast: Scalable Infrastructure-less Cooperative Perception for Distributed Collaborative Driving", in *Proceedings of ACM MobiSyS* 2022.

6. J. Zhang, K. Psounis, H. Muhammad, and Z. Shafiq, "HARPO: Learning to Subvert Online Behavioral Advertising", in *Proceedings of NDSS*, 2022.

7. L. Clark, C. Andre, J. Galante, B.Krishnamachari, and K. Psounis, "TEAM: Trilateration for Exploration and Mapping with Robotic Networks", in *Proceedings of the 18th International Conference on Ubiquitous Robots*, July 2021.

8. L. Clark, J. Galante, B.Krishnamachari, and K. Psounis, "A Queue-Stabilizing Framework for Networked Multi-Robot Exploration", in *Proceedings of IEEE International Conference on Robotics and Automation (ICRA)*, May 2021.

9. P.-H. Huang and K. Psounis, "Efficient User-Cell Association for 360 Video Streaming over Wireless Networks", in *Proceedings of IFIP Networking*, June 2020.

10. A. Petropulu, K. Psounis, and A. Al Hilli, "MIMO Radar Privacy Protection Through Gradient Enforcement in Shared Spectrum Scenarios", in *Proceedings of IEEE International Symposium on Dynamic Spectrum Access Networks (DySPAN)*, Newark, NJ, November 2019.

11. E. Alimpertis, A. Markopoulou, C. T. Butts and K. Psounis, "City-Wide Signal Strength Maps: Prediction with Random Forests", in *Proceedings of WWW*, San Fransisco, CA, May 2019. (acceptance rate 15%)

12. A. Dimas, M. Clark, B. Li, K. Psounis and A. Petropulu, "On Radar Privacy in Shared Spectrum Scenarios", in *Proceedings of the International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, Brighton, UK, May 2019.

13. K. Wang and K. Psounis. "Scheduling and Resource Allocation in 802.11ax", in *Proceedings of IEEE Infocom*, Honolulu, Hi, April 2018. (acceptance rate 19.2%)

14. M. Clark and K. Psounis. "Achievable Privacy-Performance Tradeoffs for Spectrum Sharing with a Sensing Infrastructure", in *Proceedings of the 14th Annual Conference on Wireless On-Demand Network Systems and Services (IFIP WONS)*, 8 pages (no pp. avail.), Isola, France, February 2018.

15. Y. Zhang and K. Psounis. "Efficient MU-MIMO via Switched-beam Antennas", in *Proceedings of ACM MOBIHOC*, 10 pages (no pp. avail.), Madras, India, July 2017. (acceptance rate 17%)

16. M. Clark and K. Psounis. "Designing Sensor Networks to Protect Primary Users in Spectrum Access Systems", in *Proceedings of the 13th Annual Conference on Wireless On-Demand Network Systems and Services (IFIP/IEEE WONS)*, 8 pages (no pp. avail.), Jackson, WY, February 2017. (acceptance rate 30%)

17. P.-H. Huang and K. Psounis. "Efficient mmwave wireless backhauling for dense small-cell deployments", in *Proceedings of the 13th Annual Conference on Wireless On-Demand Network Systems and Services (IFIP/IEEE WONS)*, 8 pages (no pp. avail.), Jackson, WY, February 2017. (acceptance rate 30%)

18. W. Chon Ao and K. Psounis. "An Efficient Approximation Algorithm for Online Multi-Tier Multi-Cell User Association", in *Proceedings of ACM MOBIHOC*, 10 pages (no pp. avail.), Paderborn, Germany, July 2016. (acceptance rate 18.7%)

19. H. Qiu, K. Psounis, G. Caire, K. Chugg and K. Wang. "High-Rate WiFi Broadcasting in Crowded Scenarios via Lightweight Coordination of Multiple Access Points", in *Proceedings of ACM MOBIHOC*, 10 pages (no pp. avail.), Paderborn, Germany, July 2016. (acceptance rate 18.7%)

20. M. Clark and K. Psounis. "Can the Privacy of Primary Networks in Shared Spectrum be Protected?", in *Proceedings of IEEE INFOCOM*, 9 pages (no pp. avail.), San Fransisco, April 2016. (acceptance rate 18.2%)

21. G. Zois, A. Michaloliakos, K. Psounis, V. Vassalos and I. Mourtos. "Non-asymptotic performance bounds for downlink MU-MIMO scheduling", in *Proceedings of the 12th Annual Conference on Wireless On-Demand Network Systems and Services (IFIP WONS)*, 8 pages (no pp. avail.), Italy, January 2016. (acceptance rate 30%)

22. W. Chon Ao and K. Psounis. "Distributed Caching and Small Cell Cooperation for Fast Content Delivery", in *Proceedings of ACM MOBIHOC*, pp. 127–136, Hangzhou, China, June 2015. (acceptance rate 14.8%)

23. M. Clark and K. Psounis. "Efficient Resource Scheduling for a Secondary Network in Shared Spectrum", in *Proceedings of IEEE INFOCOM*, pp. 1257–1265, Hong Kong, April 2015. (acceptance rate 19.0%)

24. R. Pal, L. Golubchik, K. Psounis, and P. Hui. "Will Cyber-Insurance Improve Network Security? A Market Analysis", in *Proceedings of IEEE INFOCOM*, pp. 235–243, Toronto, Canada, April 2014. (acceptance rate 19.4%)

25. E. N. Ciftcioglu, A. Michaloliakos, K. Psounis, T. La Porta, and A. Yener. "Power Minimization with Quality-of-Information Outages", in *Proceedings of the IEEE Wireless Communications and Networking Conference (WCNC)*, pp. 1655–1660, Istanbul, Turkey, April 2014.

26. R. Pal, L. Golubchik, K. Psounis, and P. Hui. "On A Way to Improve Cyber-Insurer Profits: When A Security Vendor Becomes the Cyber-Insurer", in *Proceedings of IFIP NETWORKING*, 9 pages (no pp. avail.), New York, May 2013. (acceptance rate 26.2%)

27. H. V. Balan, M. Segura, S. Deora, A. Michaloliakos, R. Rogalin, K. Psounis and G. Caire. "USC SDR, an easy-to-program, high data rate, real time software radio platform", in *Proceedings of the ACM SIGCOMM workshop of Software Radio Implementation Forum (SRIF 2013)*, pp. 25–30, Hong Kong, China, August 2013.

28. A. Michaloliakos, R. Rogalin, H. V. Balan, K. Psounis and G. Caire. "Efficient MAC for distributed multiuser MIMO systems", in *Proceedings of the 10th Annual Conference on Wireless On-Demand Network Systems and Services (IFIP/IEEE WONS)*, pp. 52–59, Alberta, March 2013.

29. H. V. Balan, R. Rogalin, A. Michaloliakos, K. Psounis and G. Caire, "Achieving High Data Rates in a Distributed MIMO System", in *Proceedings of ACM MOBICOM*, pp. 41–52, Istanbul, Turkey, August 2012. (acceptance rate 15.1%)

30. M. Mongiovi, A. Singh, X. Yan, B. Zong, and K. Psounis, "Efficient multicasting for delay tolerant networks using graph indexing", in *Proceedings of IEEE INFOCOM*, pp. 1386–1394, Orlando, Florida, March 2012. (acceptance rate 18.0%)

31. R. Pal, L. Golubchik, and K. Psounis. "Aegis: A Novel Cyber-Insurance Model", in *Proceedings of the 2nd Conference on Decision and Game Theory for Security (GameSec 2011)*, pp. 131–150, College Park, Maryland, November 2011.

32. E. N. Ciftcioglu, A. Yener, R. Govindan, and K. Psounis. "Operational Information Content Sum Capacity: Formulation and Examples", in *Proceedings of the 14th International Conference on Information Fusion (FUSION)*, pp. 1–7, Chicago, July 2011.

33. K.-Y. Jang, K. Psounis, and R. Govindan. "Simple Yet Efficient, Transparent Airtime Allocation for TCP in Wireless Mesh Networks", in *Proceedings of ACM CoNEXT*, article no. 28, 12 pages, Philadelphia, December 2010. (acceptance rate 19%)

34. A. Jindal and K. Psounis. "Making the Case for Random Access Scheduling in Wireless Multi-hop Networks", in *Proceedings of IEEE INFOCOM*, (mini-conference), pp. 1–5, San Diego, California, March 2010. (acceptance rate 24%)

35. S. Rangwala, A. Jindal, K.-Y. Jang, K. Psounis, and R. Govindan. "Understanding Congestion Control in Multi-hop Wireless Mesh Networks", in *Proceedings of ACM MOBICOM*, pp. 291–302, San Fransisco, California, September 2008. (acceptance rate 12%)

36. F. Papadopoulos and K. Psounis. "Scaling Properties of IEEE 802.11 Wireless Networks", in *Proceedings of the 6th Intl. Symposium on Modeling and Optimization in Mobile, Ad Hoc and Wireless Networks (WiOpt)*, 8 pages (no pp. avail.), Berlin, Germany, March 2008.

37. W.-C. Liao, F. Papadopoulos and K. Psounis. "Performance Analysis of BitTorrent-like Systems with Heterogeneous Users", in *Proceedings of the 26th International Symposium on Computer Performance, Modeling, Measurements and Evaluation (IFIP Performance)*, pp. 876–891, Cologne, Germany, October 2007. (acceptance rate 23%)

38. W.-J. Hsu, T. Spyropoulos, K. Psounis and A. Helmy. "Modeling Time-variant User Mobility in Wireless Mobile Networks", in *Proceedings of IEEE INFOCOM*, pp. 758–766, Anchorage , Alaska , USA, May 2007. (acceptance rate 18%)

39. A. Jindal, and K. Psounis. "Contention-Aware Analysis of Routing Schemes for Mobile Opportunistic Networks", in *Proceedings of ACM MOBISYS, on the 1st International Workshop on Mobile Opportunistic Networking (MobiOpp)*, pp. 1–8, San Juan, Puerto Rico, June 2007.

40. F. Papadopoulos and K. Psounis. "Predicting the Performance of Mobile Ad hoc Networks Using Scaled-down Replicas", in *Proceedings of IEEE International Conference on Communications (ICC)*, pp. 3928-3935, Glasgow, Scotland, June 2007.

41. T. Spyropoulos, K. Psounis, and C. Raghavendra. "Spray and Focus: Efficient Mobility-Assisted Routing for Heterogeneous and Correlated Mobility", in *Proceedings of IEEE PERCOM, on the International Workshop on Intermittently Connected Mobile Ad hoc Networks (ICMAN)*, pp. 79–85, New York City, USA, March 2007.

42. A. Jindal and K. Psounis. "Fundamental Mobility Properties for Realistic Performance Analysis of Intermittently Connected Mobile Networks", in *Proceedings of IEEE PERCOM, on the International Workshop on Intermittently Connected Mobile Ad hoc Networks (ICMAN)*, pp. 59–64, New York City, USA, March 2007.

43. S. Rangwala, R. Gummandi, R. Govindan, and K. Psounis. "Interference-aware fair rate control in wireless sensor networks", in *Proceedings of ACM SIGCOMM*, pp. 63–74, Pisa, Italy, September 2006. (acceptance rate 12%)

44. T. Spyropoulos, K. Psounis, and C. Raghavendra, "Performance Analysis of Mobility-assisted Routing, in *Proceedings of ACM MOBIHOC*, pp. 49–60, Florence, Italy, May 2006. (acceptance rate 10%)

45. W.-C. Liao, F. Papadopoulos, and K. Psounis. "An Efficient Algorithm for Resource Sharing in Peer-to-peer Networks", in *Proceedings of IFIP Networking*, pp. 592–605, Coimbra, Portugal, May 2006. (acceptance rate 20%)

46. A. Jindal and K. Psounis. "Performance Analysis of Epidemic Routing under Contention", in *Proceedings of IWCMC*, pp. 539–544, Vancouver, Canada, July 2006.

47. K. Psounis, P. Molinero Fernandez, B. Prabhakar, and F. Papadopoulos. "Systems with Multiple Servers under Heavy-tailed Workloads", in *Proceedings of the 24th*

International Symposium on Computer Performance, Modeling, Measurements and Evaluation (IFIP Performance), pp. 456–474, Juan-les-Pins, France, October 2005. (acceptance rate 22%)

48. A. Jindal and K. Psounis. "Modeling Spatially-correlated Data of Sensor Networks with Irregular Topologies", in *Proceedings of IEEE SECON*, pp. 305–316, Santa Clara, California, USA, October 2005. (acceptance rate 27%)

49. T. Spyropoulos, K. Psounis, and C. Raghavendra. "Spary and Wait: An Efficient Routing Scheme for Intermittently Connected Mobile Networks", in *Proceedings of ACM SIGCOMM workshop on Delay Tolerant Networking (WDTN)*, pp. 252–259 Philadelphia, Philadelphia, USA, August 2005. (acceptance rate 22%)

50. J. Faruque, K. Psounis, and A. Helmy. "Analysis of Gradient-based Routing Protocols in Sensor Networks", in *Proceedings of IEEE/ACM DCOSS*, pp. 258–275, Marina Del Rey, California, USA, June 2005. (acceptance rate 28%)

51. K. Psounis, A. Ghosh, B. Prabhakar, and G. Wang. "SIFT: a Simple Algorithm for Trucking Elephant Flows and Taking Advantage of Power Laws", in *Proceedings of the 43rd Allerton Conference on Communication, Control, and Computing*, 10 pages (no pp. avail.), Urbana-Champaign, Illinois, USA, September 2005.

52. F. Papadopoulos, K. Psounis, and R. Govindan. "Performance-Preserving Network Downscaling", in *Proceedings of the 38th Annual Simulation Symposium (ANSS)*, pp. 285–294, San Diego, California, April 2005.

53. A. Jindal and K. Psounis. "Modelling Spatially-correlated Sensor Network Data", in *Proceedings of IEEE SECON*, pp. 162–171, Santa Clara, California, USA, October 2004. (acceptance rate 19%)

54. T. Spyropoulos, K.Psounis, and C. Raghavendra. "Single-copy Routing in Intermittently Connected Mobile Networks", in *Proceedings of IEEE SECON*, pp. 235–244, Santa Clara, California, USA, October 2004. (acceptance rate 19%)

55. R. Pan, B. Prabhakar, K. Psounis, and D. Wischik. "SHRiNK: A Method for Scalable Performance Prediction and Efficient Network Simulation", in *Proceedings of IEEE INFOCOM*, Vol. 3, pp. 1943–1953, San Fransisco, California, USA, April 2003. (acceptance rate 21%)

56. K. Psounis, R. Pan, B. Prabhakar, and D. Wischik. "The Scaling Hypothesis: Simplifying the Prediction of Network Performance Using Scaled-down Simulations", in *Proceedings of ACM HOTNETS*, pp. 35–40, Princeton, New Jersey, USA, October 2002.

57. R. Pan, B. Prabhakar, K. Psounis, and M. Sharma. "A Study of the Applicability of a Scaling Hypothesis", in *Proceedings of ASCC*, 6 pages (no pp. avail.), Singapore, Singapore, September 2002.

58. K. Psounis. "Class-based Delta Encoding: A Scalable Scheme for Caching Dynamic Web Content", in *Proceedings of IEEE ICDCS Workshops*, pp. 799 - 805, Vienna, Austria, July 2002.

59. K. Psounis and B. Prabhakar. "A Randomized Web-cache Replacement Scheme", in *Proceedings of IEEE INFOCOM*, Vol. 3, pp. 1407–1415, Anchorage, Alaska, USA, April 2001. (acceptance rate 23%)

60. R. Pan, B. Prabhakar, and K. Psounis. "CHOKe, A Stateless Active Queue Management Scheme for Approximating Fair Bandwidth Allocation", in *Proceedings of IEEE INFOCOM*, Vol. 2, pp. 942–951, Tel Aviv, Israel, March 2000. (acceptance rate 26%)

61. K. Psounis, R. Pan, and B. Prabhakar. "An Approximate Fair Dropping Scheme for Variable Length Packets", in *Proceedings of Hot Interconnects 8*, pp. 2–10, Stanford, California, USA, August 2000.

62. K. Psounis, B. Prabhakar, and D. Engler. "A Randomized Cache Replacement Scheme Approximating LRU", in *Proceedings of the 34th annual conference on Information Sciences and Systems*, 6 pages (no pp. avail.), Princeton, New Jersey, USA, March 2000.

Book Chapters

1. K. Psounis and M. Clark. Privacy in Spectrum Sharing Systems with Applications to Communications and Radar, In *Signal Processing for Joint Radar-Communications*, Wiley-IEEE Press, 2021.

Invited Journals

1. T. Spyropoulos, A. Jindal, and K. Psounis. "An Analytical Study of Fundamental Mobility Properties for Encounter-based Protocols", *International Journal of Autonomous and Adaptive Communications Systems*, Vol. 1, Issue 1, pp. 440, July 2008.

Invited Conference Papers

1. L. Clark, M. Clark, K. Psounis and P. Kairouz. "Privacy-utility trades in wireless data via optimization and learning", in *Proceedings of the Information Theory and Applications Workshop (ITA)*, 10 pages (no pp. avail.), San Diego, California, USA, February 2019.

2. A. Dimas, B. Li, M. Clark, K. Psounis, A. Petropulu. "Spectrum Sharing Between Radar and Communication systems: Can the Privacy of the Radar be Preserved?", in *Proceedings of the Asilomar Conference on Signals, Systems and Computers*, Pacific Grove, California, USA, October 2017.

3. A. Michaloliakos, W. Chon Ao and K. Psounis. "Joint user-beam selection for hybrid beamforming in asynchronously coordinated multi-cell networks", in *Proceedings of the Information Theory and Applications Workshop (ITA)*, 10 pages (no pp. avail.), San Diego, California, USA, February 2016.

4. Y. Zhang, D. Bethanabhotla, T. Hao and K. Psounis. "Near-optimal user-cell association schemes for real-world networks", in *Proceedings of the Information Theory and Applications Workshop (ITA)*, 10 pages (no pp. avail.), San Diego, California, USA, February 2015.

5. A. Jindal, K. Psounis, and M. Liu. "CapEst: Estimating wireless link capacity in multi-hop networks", in *Proceedings of the Information Theory and Applications Workshop (ITA)*, 6 pages (no pp. avail.), San Diego, California, USA, February 2011.

6. D. Antonellis, A. Mansy, K. Psounis, and M. Ammar. "Real time, distributed network classification for routing protocol selection in mobile ad hoc networks", in *Proceedings of the fourth international wireless Internet conference (WICON)*, 8 pages (no pp. avail.), Maui, Hawaii, November 2008.

7. Y. Wang, A. Ahmed, B. Krishnamachari, and K. Psounis. "IEEE 802.11p performance evaluation and protocol enhancement", in *Proceedings of the IEEE International Conference on Vehicular Electronics and Safety*, pp. 317–322, Columbus, Ohio, USA, September 2008.

8. A. Jindal and K. Psounis. "Achievable Rate Region and Optimality of Multi-hop Wireless 802.11-Scheduled Networks", in *Proceedings of the Information Theory and Applications Workshop (ITA)*, 7 pages (no pp. avail.), San Diego, California, USA, January 2008.

9. F. Papadopoulos and K. Psounis. "Application of the many sources asymptotic in downscaling Internet-like networks", in *Proceedings of the Information Theory and Applications Workshop (ITA)*, pp. 314–322, San Diego, California, USA, January 2007.

10. A. Jindal and K. Psounis. "Optimizing Multi-Copy Routing Schemes for Resource Constrained Intermittently Connected Mobile Networks", in *Proceedings of the Fortieth Asilomar Conference on Signals, Systems and Computers*, pp. 2142–2146, Pacific Grove, California, USA, October 2006.

Citations

- Total citations: 14544
- h-index: 41

(source: google scholar, accessed: June 2024)

Issued Patents

- G. Caire, K. Psounis. Composite beamforming to coordinate concurrent WLAN links. Quantenna Communications, Inc.
  US Patent No. 9,479,240, issued Oct. 2016.

- K. Psounis, G. Caire, H. V. Balan. AirSync: enabling distributed multiuser MIMO with full multiplexing gain. USC.
  US Patent No. 61,651,964, issued Jan. 2015.

- K. Psounis and J. Jawahar. Method and System for Class-based Management of Dynamic Content in a Networked Environment. Cisco Systems, Inc.
  US Patent No. 7,802,014, issued Sep. 2010.

- R. Pan, B. Prabhakar and K. Psounis. A Stateless Active Queue Management Scheme for Approximating Fair Bandwidth Allocation. Stanford.
  US Patent No. 7,324,442, issued Jan. 2008.

Selected Professional Service

INTERNATIONAL CONFERENCES - ORGANIZING/EXECUTIVE COMMITTEE

- Steering Committee, IFIP/IEEE WONS, 2017 - now.
- General Chair, ACM SIGMETRICS, 2018.
- General Chair, IFIP/IEEE WONS, 2017.
- Program Chair, IFIP/IEEE WONS, 2016.
- Program Chair, IEEE DCOSS workshop on Wireless Sensor Networks (PWSN), 2014.
- Program Chair, ACM MOBICOM workshop on Challenged Networks (CHANTS), 2008.
- Workshop Chair, ACM SIGMETRICS 2008.
- Workshop Chair, USC Workshop on Theory and Practice in Wireless Networks, 2008.
- Publication Chair, ACM SIGMETRICS 2007.
- Panel Chair, ACM MOBIHOC, 2009.
- Panel Chair, IEEE CCW, 2008.

INTERNATIONAL CONFERENCES - TECHNICAL PROGRAM COMMITTEE

- IFIP/IEEE WONS 2013 - 2014, 2018, 2022
- IEEE INFOCOM 2005 - 2020.
- ACM SIGMETRICS 2008, 2014, 2015, 2017, 2020.
- ACM MOBIHOC, 2008 - 2010, 2017-2020.
- WiOpt 2016-2017.

- IEEE SECON 2007 - 2010.
- IFIP NETWORKING 2006 - 2010.
- ACM MOBICOM, 2009.
- IEEE ICNP 2009.
- IEEE WOWMOM workshop on Autonomic and Opportunistic Communications (AOC), 2008 -2009.
- IEEE ICDCS workshop on Delay Tolerant Mobile Networks (DTMN), 2008.
- ACM MOBISYS workshop on Mobile Opportunistic Networks (MOBIOPP), 2007.
- IEEE PERCOM workshop on Intermittently Connected Mobile Ad hoc Networks (IC-MAN), 2007.

JOURNALS

- Editorial Board, IEEE/ACM Transactions on Networking (ToN), 2015 - 2020.
- Editorial Board, IEEE Transactions on Mobile Computing (TMC), 2009 - 2019.
- Editorial Board, Computer Networks Journal, Elsevier, 2009 - 2010.
- Editorial Board, International Journal of Autonomous and Adaptive Communications Systems (IJAACS), 2008.
- Reviewer of IEEE/ACM Transactions on Networking, IEEE Journal on Selected Areas in Communication, IEEE Transactions on Parallel and Distributed Systems, IEEE Transactions on Mobile Computing, ACM Transactions on Sensor networks, Elsevier Computer Networks Journal, Elsevier Performance Evaluation Journal, Elseviers Ad Hoc Networks Journal, Transportation Research Journal Part C, IEEE Transactions on Automatic Control.

GOVERNMENTAL AGENCIES

- NSF ML panel, 2020.
- NSF CAREER panel, 2019.
- NSF EARS meeting, 2016.
- NSF Future Internet Architecture Summit participant, 2009.
- NSF CRI panel member, 2008.
- NSF Wireless mobile workshop participant, 2007.
- NSF NeTS-NOSS panel member, 2005.
- Reviewer of NSF NeTS proposals.

Professional Associations

- Institute of Electrical and Electronic Engineers (IEEE):
  IEEE Fellow, 2018 - now.
  Senior Member, 2008 - 2017.
  Member, 1998 - 2008.
- Association for Computing Machinery (ACM):
  ACM Distinguished Member, 2019 - now.
  Senior Member, 2009 - 2018.
  Member, 2001 - 2008.
- Technical Institution of Greece (TEE), 1997 - now.

Languages   English, Greek, French.

Personal   Married, three children.